AMENDMENTS TO THE CLAIMS

This listing of Claims shall replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-60. (Cancelled)

61. (New) A method of AC prediction, said method comprising:

performing DC prediction, using a first circuit, for a first macroblock using DC coefficients associated with at least one macroblock adjacent to said first macroblock;

performing AC prediction, using a second circuit, for said first macroblock using AC coefficients associated with said at least one macroblock; and

determining whether an overflow condition is to occur in a first data packet if said first macroblock is encoded in said first data packet, wherein said determining further comprises determining whether said overflow condition is to occur based on a quantity of nonzero coefficients determined responsive to said AC prediction.

62. (New) The method of Claim 61 further comprising:

if said overflow condition is not to occur, supplying AC predict coefficients and DC predict coefficients for encoding said first macroblock in said first data packet;

if said overflow condition is to occur, supplying said AC coefficients and said DC predict coefficients for encoding said first macroblock in a second data packet; and

disabling AC prediction, responsive to said overflow condition, for encoding said first macroblock in said second data packet.

63. (New) The method of Claim 61 further comprising:

enabling AC prediction for encoding a plurality of macroblocks in a second data packet, wherein said plurality of macroblocks is distinct from said first macroblock.

64. (New) The method of Claim 61 further comprising:

if said overflow condition is not to occur, encoding said first macroblock in said first data packet with AC prediction; and

if said overflow condition is to occur, disabling AC prediction and encoding said first macroblock in a second data packet without AC prediction.

65. (New) The method of Claim 61, wherein said determining comprises determining whether said overflow condition is to occur in said first data packet prior to performing further AC prediction for said first macroblock.

66. (New) The method of Claim 61 further comprising:

if said overflow condition is to occur, performing a second DC prediction for said first macroblock; and

suspending further AC prediction for said first macroblock.

67. (New) The method of Claim 61, wherein said performing said DC prediction, said performing said AC prediction, said determining whether an overflow condition is to occur are performed in a data partition mode.

68. (New) The method of Claim 61 further comprising:

if no overflow condition is to occur, determining a predict direction associated with said DC prediction and said AC prediction;

if said predict direction is determined to be horizontal, generating a signal for performing an alternate-horizontal scan; and

if said predict direction is determined to be vertical, generating a signal for performing an alternate-vertical scan.

69. (New) The method of Claim 61 further comprising:

if said overflow condition is to occur, generating a signal for performing a zig-zag scan.

70. (New) The method of Claim 61, wherein said DC coefficients and said AC coefficients comprise a transform coefficient data set, and wherein said transform coefficient data set is generated using a discrete cosine transform.

71. (New) The method of Claim 61 further comprising:

before determining whether said overflow condition is to occur, determining a macroblock type of said first macroblock;

if said first macroblock comprises an inter block, supplying said AC coefficients and said DC coefficients for encoding said first macroblock in said first data packet;

if said first macroblock comprises an intra block, determining an AC prediction mode status associated with said AC prediction;

if said AC prediction is disabled, supplying said AC coefficients and said DC predict coefficients for encoding said first macroblock in said first data packet; and

if said AC prediction is enabled, supplying said AC predict coefficients and said DC predict coefficients for encoding said first macroblock in said first data packet.

72. (New) A method of AC prediction, said method comprising:

performing AC prediction for a first macroblock using AC coefficients associated with at least one macroblock adjacent to said first macroblock;

determining whether an overflow condition is to occur in a first data packet if said first macroblock is encoded in a first data packet, wherein said determining further comprises determining whether said overflow condition is to occur based on a quantity of nonzero coefficients determined responsive to said AC prediction; and

if said overflow condition is to occur, disabling said AC prediction and encoding said first macroblock in a second data packet.

73. (New) The method of Claim 72 further comprising:

if said overflow condition is not to occur, supplying AC predict coefficients and DC predict coefficients for encoding said first macroblock in said first data packet; and

if said overflow condition is to occur, supplying said AC coefficients and DC predict coefficients for encoding said first macroblock in a second data packet.

74. (New) The method of Claim 72 further comprising:

enabling AC prediction for encoding a plurality of macroblocks in said second data packet, wherein said plurality of macroblocks is distinct from said first macroblock.

75. (New) The method of Claim 72 further comprising:

if said overflow condition is not to occur, encoding said first macroblock in said first data packet with AC prediction.

76. (New) The method of Claim 72, wherein said determining comprises determining whether said overflow condition is to occur in said first data packet prior to performing further AC prediction for said first macroblock.

77. (New) The method of Claim 72 further comprising:

if said overflow condition is to occur, performing a second DC prediction for said first macroblock; and

suspending further AC prediction for said first macroblock.

78. (New) The method of Claim 72, wherein said performing said AC prediction and said determining whether an overflow condition is to occur are performed in a data partition mode.

79. (New) The method of Claim 72 further comprising:

if said overflow condition is not to occur, determining a predict direction associated with said DC prediction and said AC prediction;

if said predict direction is determined to be horizontal, generating a signal for performing an alternate-horizontal scan; and

if said predict direction is determined to be vertical, generating a signal for performing an alternate-vertical scan.

80. (New) The method of Claim 72 further comprising:

if said overflow condition is to occur, generating a signal for performing a zig-zag scan.

81. (New) The method of Claim 72, wherein said AC coefficients are part of a transform coefficient data set, and wherein said transform coefficient data set is generated using a discrete cosine transform.

82. (New) The method of Claim 72 further comprising:

before determining whether said overflow condition is to occur, determining a macroblock type of said first macroblock;

if said first macroblock comprises an inter block, supplying said AC coefficients and DC coefficients for encoding said first macroblock in said first data packet;

if said first macroblock comprises an intra block, determining an AC prediction mode status associated with said AC prediction;

if said AC prediction is disabled, supplying said AC coefficients and DC predict coefficients for encoding said first macroblock in said first data packet; and

if said AC prediction is enabled, supplying said AC predict coefficients and DC predict coefficients for encoding said first macroblock in said first data packet.